

Notice of Allowability

Application No.

10/054,945

Examiner

Pensee T. Do

Applicant(s)

LEE, GIL U.

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the preliminary amendment filed on 1/25/02.
2. ☒ The allowed claim(s) is/are 28-37.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 5/9/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 3/17/04
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Steve Hunnius on March 17, 2004.

The application has been amended as follows:

Claim 28, step (d), --to characterize the binding forces of the plurality of different surface-bound binding members and the particle-bound binding member— is inserted after "(c)".

Claim 29, step (d), --to characterize the binding forces of the plurality of different surface-bound binding members and the particle-bound binding member— is inserted after "(c)".

Claim 30, step (d), --in relation to the presence or amount of analyte of interest in the test sample— is inserted after "surface".

Claim 35, step (d), "monitoring" is replaced with --detecting--.

Claim 35, step (d), --which correlates to the presence or amount of analyte of interest in the test sample-- is inserted after "surface".

Claim 36, step (d), "monitoring" is replaced with --detecting--.

Claim 36, step (d), --which correlates to the presence or amount of analyte of interest in the test sample-- is inserted after "surface".

Claim 37, --which correlates to the presence or amount of analyte of interest in the test sample— is inserted after “second particles”.

The following is an examiner's statement of reasons for allowance: The prior arts fails to teach a method for characterizing the binding forces of a plurality of different surface-bound binding members and a particle-bound binding member, the method comprising the steps of: (a) providing (i) a surface having a spatially distinguishable subregions, each subregion having a different surface-bound binding member attached thereto; and (ii) a plurality of particles that have a particle bound binding member attached thereto; (b) contacting the particles with the surface under conditions such that if a surface-bound binding member and a particle-bound binding member have a binding affinity for each other, a complex is formed between the surface-bound binding member and a particle-bound binding member whereby the particles become immobilized with respect to the surface; (c) directing an ultrasonic force onto the surface wherein the intensity of the ultrasonic force is first initiated at low level that is insufficient to separate the complex and is gradually increased to a higher level that is sufficient to separate the complex; (d) monitoring the position of the particles with respect to the surface before and after step (c). In another embodiment that includes a labeled reagent with a second binding member, separation is performed by directing an ultrasonic force onto the surface wherein the intensity of the ultrasonic force is controlled to cause the dislodging any of the labeled reagent that binds non-specifically to the surface or that becomes immobilized on the surface due to cross-reactivity with an analog of the analyte and wherein the intensity of the ultrasonic force is controlled to prevent the

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dislodging of the labeled reagent that becomes immobilized specifically with respect to the surface in relation to the amount of the analyte in the test sample; following separation is the removal of any labeled reagent that becomes dislodged; and detecting the amount of labeled reagent that remains immobilized with respect to the surface.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pensee T. Do whose telephone number is 571-272-0819. The examiner can normally be reached on Monday-Friday, 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Pensee T. Do
Patent Examiner
March 12, 2004

A handwritten signature in black ink that reads "Christopher L. Chin". The signature is written in a cursive style with a large, stylized "C" and "L".

CHRISTOPHER L. CHIN
PRIMARY EXAMINER
GROUP ~~1800~~/641